



SERVICE/OPERATION MANUAL



HSS 9000 Hydraulic Airless Paint Sprayer

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Specifications subject to change without notice.



INTRODUCTION

Your new Airlessco airless paint sprayer is designed to meet the demands of the professional painting contractor as well as the homeowner. The famous Airlessco slow-stroking stainless steel piston pump delivers extra long life for the piston, packings, valve seats and balls. The patented Triple-Life packing system is externally adjustable extending packing life and reducing repacking costs. Its' large high-torque electric motor runs slower reducing heat. And the motor is fan cooled and totally enclosed to reduce brush wear, and to prevent the ignition of paint fumes in the motor.



HSS 9000

Max. Pressure	3300 PSI
Max. Hose Length	300 FT
Weight Bare	140 Lbs

TEFC 1.25HP Electric Motor:

Output	1.25 GPM
Max Tip Size	.036" 1-Gun .026" 2-Guns

6.5HP Gas Engine:

Output	2.7 GPM
Max Tip Size	.052" 1-Gun .038" 1-Guns



WARNING

HANDLE THIS UNIT AS YOU WOULD A LOADED FIREARM!
High pressure spray can cause extremely serious injury.
OBSERVE ALL WARNINGS!

Before operating this unit, read and follow all safety warnings and instructions related to the usage of this equipment on pages 2, 3 & 4. READ, LEARN, and FOLLOW the Pressure Relief Procedure on Page 11 of this manual.

All Service Procedures to be performed by an Authorized Airlessco Service Center ONLY.

NO MODIFICATIONS or alterations of any AIRLESSCO Equipment or part is allowed.

MANUAL NOTATIONS

WARNING - Alerts user to avoid or correct conditions that could cause bodily injury.

CAUTION - Alerts user to avoid or correct conditions that could cause damage to or destruction of equipment.

IMPORTANT - Alerts users to steps or procedures that are essential to proper equipment repair and maintenance.

NOTE - Identifies essential procedures or extra information.

SAFETY WARNINGS

HIGH PRESSURE SPRAY CAN CAUSE EXTREMELY SERIOUS INJURY.

Handle as you would a loaded firearm.

Follow the PRESSURE RELIEF PROCEDURE.

DO NOT USE HALOGENATED SOLVENTS IN THIS SYSTEM.

The prime valve, and most airless guns have aluminum parts and may explode. Cleaning agents, coatings, paints or adhesives may contain halogenated hydrocarbon solvents. **DON'T TAKE CHANCES!** Consult your material suppliers to be sure. Some of the most common of these solvents are: Carbontetrachloride, Chlorobenzene, Dichloroethane, Dichloroethyl Ether, Ethylbromide, Ethylchloride, Tetrachloroethane. Alternate valves and guns are available if you need to use these solvents.

MEDICAL ALERT - Airless Spray Wounds

If any fluid appears to penetrate your skin, get
EMERGENCY MEDICAL CARE AT ONCE.

DO NOT TREAT AS A SIMPLE CUT.

Tell the doctor exactly what fluid was injected.

NOTE TO PHYSICIAN: Injection in the skin is a traumatic injury. **It is important to treat the injury surgically as soon as possible. DO NOT DELAY treatment to research toxicity.** Toxicity is a concern with some exotic coatings injected directly into the blood stream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.

INJECTION HAZARD

- Fluids under high pressure from spray or leaks can penetrate the skin and cause extremely serious injury, including the need for amputation.
- **NEVER** point the spray gun at anyone or any part of the body.
- **NEVER** put your hand or fingers over the spray tip. Do not use a rag or any other materials over your fingers. Paint will penetrate through these materials & into the hand.
- **NEVER** try to stop or deflect leaks with your hand or body.
- **ALWAYS** have the tip guard in place when spraying.
- **ALWAYS** lock the gun trigger when you stop spraying.
- **ALWAYS** remove tip from the gun to clean it.
- **NEVER** try to "blow back" paint, this is not an air spray sprayer.
- **ALWAYS** follow the **PRESSURE RELIEF PROCEDURE** before cleaning or removing the spray tip or servicing any system equipment.
- Be sure the equipment safety devices are operating properly before each use.
- Tighten all of the fluid connections before each use.

MEDICAL TREATMENT

- If any fluid appears to penetrate your skin, get **EMERGENCY CARE AT ONCE! DON'T TREAT AS A SIMPLE CUT.**
- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Tell him what kind of material you were spraying with and have him **read NOTE TO PHYSICIAN above.**

GENERAL PRECAUTIONS

- **NEVER** alter equipment in any manner.
- **NEVER** smoke while in spraying area.
- **NEVER** spray highly flammable materials.
- **NEVER** use around children.
- **NEVER** allow another person to use sprayer unless he is thoroughly instructed on its safe use and given this operators manual to read.
- **ALWAYS** wear a spray mask, gloves and protective eye wear while spraying.
- **ALWAYS** ensure fire extinguishing equipment is readily available and properly maintained.

**NEVER LEAVE SPRAYER UNATTENDED
WITH PRESSURE IN THE SYSTEM.**

**FOLLOW PRESSURE RELIEF
PROCEDURES.**

NOTE: United States Government safety standards have been adopted under the Occupational Safety & Health Act. These standards, particularly the General Standards, Part 1910 & Construction Standards, Part 1926 should be consulted.

SAFETY WARNINGS

ALWAYS INSPECT SPRAYING AREA

- Keep the spraying area free from obstructions.
- Make sure the spraying area has good ventilation to safely remove vapors and mists.
- **NEVER** keep flammable material in spraying area.
- **NEVER** spray in vicinity of open flame or other sources of ignition.
- The spraying area must be at least 20 ft. away from spray unit.

SPRAY GUN SAFETY

- **ALWAYS** set gun safety lock in the "LOCKED" position when not in use & before servicing or cleaning.
- **NEVER** remove or modify any part of the gun.
- **ALWAYS** REMOVE THE SPRAY TIP when cleaning. Flush unit at the **LOWEST POSSIBLE PRESSURE**.
- **ALWAYS** check operation of all gun safety devices before each use.
- Be very careful when removing the spray tip or hose from the gun. A plugged line will contain fluid under pressure. If the tip or line is plugged, follow the **PRESSURE RELIEF PROCEDURE**.

TIP GUARD

- **ALWAYS** have the tip guard in place on the spray gun while spraying. The tip guard alerts you to the injection hazard and helps prevent accidentally placing your fingers or any part of your body close to the spray tip.

SPRAY TIP SAFETY

- Use extreme caution when cleaning or changing spray tips. If the spray tip clogs while spraying, engage the gun safety latch immediately. **ALWAYS** follow the **PRESSURE RELIEF PROCEDURE** and then remove the spray tip to clean it.
- **NEVER** wipe off build up around the spray tip.

TOXIC FLUID HAZARD

- **ALWAYS** remove tip guard & tip to clean **AFTER** pump is turned off and the pressure is relieved by following the **PRESSURE RELIEF PROCEDURE**.
- Hazardous fluid or toxic fumes can cause serious injury or death if splashed in eyes or on skin, inhaled or swallowed. Know the hazards of the fluid you are using. Store & dispose of hazardous fluid according to manufacturer, local, state & national guidelines.
- **ALWAYS** wear protective eyewear, gloves, clothing and respirator as recommended by fluid manufacturer.

HOSES

- Tighten all of the fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling and result in an injection injury or serious bodily injury.
- Only use hoses with a spring guard. The spring guard helps protect the hose from kinks or other damage which could result in hose rupture and cause an injection injury.
- **NEVER** use a damaged hose, which can result in hose failure or rupture and cause an injection injury or other serious bodily injury or property damage. Before each use, check entire hose for cuts, leaks, abrasions, bulging of the cover, or damage or movement of couplings. If any of these conditions exist, replace the hose immediately.
- **NEVER** use tape or any device to try to mend the hose as it cannot contain the high pressure fluid. **NEVER ATTEMPT TO RECOUPLE THE HOSE.** A high pressure hose is not recoupleable.

GROUNDING

- Ground the sprayer & other components in the system to reduce the risk of static sparking, fire or explosion which can result in serious bodily injury and property damage. For detailed instructions on how to ground, check your local electrical code.
- **ALWAYS** ensure switch is in OFF position before plugging unit in.

Always Ground All of These Components:

1. **Sprayer:** plug the power supply cord, or extension cord, each equipped with an undamaged three-prong plug, into a properly grounded outlet. **DO NOT USE AN ADAPTER.** Use only a 3 wire extension cord that has a 3 blade grounding plug, and a 3 slot receptacle that will accept the plug on the product. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. (**Note:** The table on the top of the next page shows the correct size to use depending on cord length and name plate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.)
 2. **Fluid hose:** use only grounded hoses.
 3. **Spray gun or dispensing valve:** grounding is obtained through connection to a properly grounded fluid hose and pump.
 4. **Object being sprayed:** according to your local code.
 5. **All solvent pails** used when flushing.
- Once each week, check electrical resistance of hose (when using multiple hose assemblies, check overall resistance.) Overall (end to end) resistance of unpressurized hose must not exceed 29 megohms (max.) for any coupled length or combination of hose lengths. If hose exceeds these limits, replace it immediately.
 - Never exceed 500 ft. (150 m) overall combined cord length to assure electrical continuity.

SAFETY WARNINGS

Always Follow Recommended Pressure and Operating Instructions

KEEP CLEAR OF MOVING PARTS

Keep clear of moving parts when starting or operating the sprayer. Do not put your fingers into any openings to avoid amputation by moving parts or burns on hot parts. Precaution is the best insurance against an accident. When starting the motor, maintain a safe distance from moving parts of the equipment. Before adjusting or servicing any mechanical part of the sprayer, follow the PRESSURE RELIEF PROCEDURE.

AVOID COMPONENT RUPTURE

- This sprayer operates at 3000 psi (205 bar). Always be sure that all components and accessories have a maximum working pressure of at least 3000 psi to avoid rupture which can result in serious bodily injury including injection and property damage.
- **NEVER** leave a pressurized sprayer unattended to avoid accidental operation of it, which could result in serious bodily injury.
- **ALWAYS** follow the PRESSURE RELIEF PROCEDURE whenever you stop spraying and before adjusting, removing or repairing any part of the sprayer.
- **NEVER** alter or modify any part of the equipment to avoid possible component rupture which could result in serious bodily injury and property damage.
- **NEVER** use weak, damaged, or non-conductive paint hose. Do not allow kinking or crushing of hoses or allow it to vibrate against rough, sharp or hot surfaces. Before each use, check your hoses for damage and wear and ensure all of the fluid connections are secure.
- **ALWAYS** replace any damaged hose. **NEVER** use tape or any device to mend the hose.
- **NEVER** attempt to stop any leakage in the line or fittings with your hand or any part of the body. Turn off the unit and release pressure by following PRESSURE RELIEF PROCEDURE.

WHEN SPRAYING & CLEANING WITH FLAMMABLE PAINTS AND THINNERS

1. When spraying with flammable liquids, the unit must be located a minimum of 25 feet away from the spraying area in a well ventilated area. Ventilation must be sufficient enough to prevent the accumulation of vapors.
2. To eliminate electrostatic discharge, ground the spray unit, paint bucket & spraying object. See GROUNDING. Use only high pressure airless hoses approved for 3000 psi which is conductive.
3. Remove the spray tip before flushing. Hold the metal part of the gun firmly to the side of a metal pail & use the lowest possible fluid pressure during flushing.
4. Never use high pressure in the cleaning process. **USE MINIMUM PRESSURE.**
5. Do not smoke in spraying/cleaning area.

- **ALWAYS** use approved high pressure fittings and replacement parts.
- **ALWAYS** ensure fire extinguishing equipment is readily available and properly maintained.

PREVENT STATIC SPARKING FIRE/EXPLOSIONS

- **ALWAYS** be sure all of the equipment & objects being sprayed are properly grounded. Always ground sprayer, paint bucket and object being sprayed. See the grounding section of this manual for grounding information.
- Vapors created when spraying can be ignited by sparks. To reduce the risk of fire, always locate the sprayer at least 20 feet (6 m.) away from spray area. Do not plug in or unplug any electrical cords in the spray area. Doing so can cause sparks which can ignite any vapors still in the air. Follow the coating & solvent manufacturers safety warnings and precautions.
- Use only conductive fluid hoses for airless applications. Be sure the gun is grounded through the hose connections. Check ground continuity in hose & equipment. Overall (end to end) resistance of unpressurized hose must not exceed 29 megohms for any coupled length or combination of hose length. Use only high pressure airless hoses with static wire approved for 3000 psi.

FLUSHING

- Reduce the risk of injection injury, static sparking or splashing by following the specific cleaning process.
- **ALWAYS** follow the PRESSURE RELIEF PROCEDURE.
- **ALWAYS** remove the spray tip before flushing. Hold the metal part of the gun firmly to the side of a metal pail & use the lowest possible fluid pressure during flushing.
- **NEVER** use cleaning solvents with flash points below 140 degrees F. Some of these are: acetone, benzene, ether, gasoline, naptha. Consult your supplier to be sure.
- **NEVER** SMOKE in the spraying/cleaning area.

GAS ENGINE PRECAUTIONS

WARNING

Gasoline & its vapors are extremely flammable & explosive. Fire or explosion can cause severe burns or death.

WHEN ADDING FUEL

- Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.
- Fill fuel tank outdoors or in well ventilated area.
- Do not overfill fuel tank. Fill tank to approximately 1½ inches below top of neck to allow for fuel expansion.
- Keep gasoline away from sparks, open flames, pilot lights, heat and other ignition sources.
- Check fuel lines, tank, cap and fittings frequently for cracks or leaks. Replace if necessary.

WHEN STARTING ENGINE

- Make sure spark plug, muffler, fuel cap & air cleaner are in place.
- Do not crank engine with spark plug removed.
- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, Place throttle in FAST and crank until engine starts.

WHEN OPERATING EQUIPMENT

- Do not tip engine or equipment at angle which causes gasoline to spill.
- Do not choke carburetor to stop engine.

WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters and other appliances that have pilot lights or other ignition source. They can ignite gasoline vapors.

WARNING

**Starting engine creates sparking.
Sparking can ignite nearby flammable gases.
Explosion and fire could result.**

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly.
- Remove all external equipment/engine loads before starting engine.
- Direct coupled equipment components such as, but not limited to, blades, impellers, pulleys, sprockets, etc. must be securely attached.

COMPONENT & CONTROL LOCATIONS

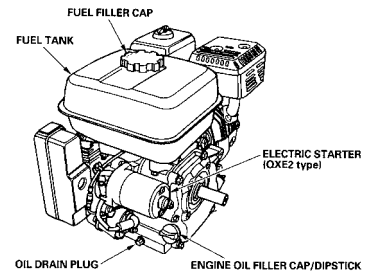
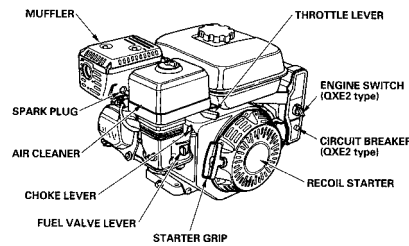


FIGURE 1

WARNING

**Engines give off carbon monoxide, an odorless, colorless, poison gas.
Breathing carbon monoxide can cause nausea, fainting or death.**

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.

WARNING

**Running engines produce heat. Engine parts, especially mufflers, become extremely hot.
Severe thermal burns can occur on contact.
Combustible debris, such as leaves, grass, brush, etc. can catch fire.**

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated combustibles from muffler area and cylinder area.
- Install and maintain in working order a spark arrester before using equipment on forest covered, grass covered and brush covered unimproved land. The state of California requires this (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.

WARNING

**Unintentional sparking can result in fire or electric shock.
Unintentional start up can result in entanglement, traumatic amputation, or lacerations.**

BEFORE PERFORMING ADJUSTMENTS OR REPAIRS

- Disconnect spark plug wire and keep it away from spark plug.
- Disconnect battery at negative terminal (only engines with electric start).

WHEN TESTING FOR SPARK

- Use approved spark plug tester.
- Do not check for spark with spark plug removal.

GAS ENGINE PRECAUTIONS (continued)

- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, place throttle in FAST and crank until engine starts.

WHEN OPERATING EQUIPMENT

- Do not tip engine or equipment at angle which causes gasoline to spill.
- Do not choke carburetor to stop engine.

WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters and other appliances that have pilot lights or other ignition source. They can ignite gasoline vapors.

**Starting engine creates sparking.
Sparking can ignite nearby flammable gases.
Explosion and fire could result.**

- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fluids because vapors are flammable.

WARNING

**Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.
Broken bones, fractures, bruises or sprains could result.**

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly.
- Remove all external equipment/engine loads before starting engine.
- Direct coupled equipment components such as, but not limited to, blades, impellers, pulleys, sprockets, etc. must be securely attached.

WARNING

**Rotating parts can contact or entangle hands, feet, hair, clothing or accessories.
Traumatic amputation or severe laceration can result.**

- Operate equipment with guards in place.
- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Do not wear loose fitting clothing, dangling drawstrings or items that could become caught.

FLUSHING

1. New Sprayer

Your sprayer was factory tested in an oil solution which was left in the pump. **Before using oil-base paint**, flush with mineral spirits only. **Before using water-base paint** flush with mineral spirits, followed by soapy water, then a clean water flush.

2. Changing Colors

Flush with a compatible solvent such as mineral spirits or water.

3. Changing from water-base to oil-base paint.

Flush with soapy water, then mineral spirits.

4. Changing from oil-base to water-base paint.

Flush with mineral spirits, followed by soapy water, then a clean water flush.

5. Storage

Always relieve pressure (See pressure relief procedure on page 11) prior to storage or when machine is unattended.

Oil-base Paint: Flush with mineral spirits. Ensure that there is no pressure in the unit, then close the prime/pressure relief valve.

Water-base Paint: Flush with water, then mineral spirits. For longer term storage use a 50/50 mixture of mineral spirits and motor oil. Always ensure that there is no pressure in the unit, and close the prime/pressure relief valve for storage.

6. Start-up after storage

Before using water-base paint, flush with soapy water and then a clean water flush.

When using oil-base paint, flush out the mineral spirits with the material to be sprayed.

WARNING

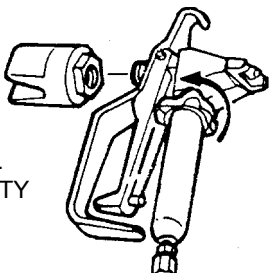
***NEVER leave pump unattended
while under pressure!***

HOW TO FLUSH

1. Be sure the gun safety latch is engaged and there is no spray tip in the gun. Refer to page 14 on how to lock the safety latch and the gun's safety features.

FIGURE 2

REMOVE SPRAY TIP.
ENGAGE GUN SAFETY
LATCH.



2. Pour enough clean, compatible solvent into a large, empty metal pail to fill the pump and hoses.
3. Place the suction tube into the pail.
4. Turn the Prime Valve (Figure 6) to the "OPEN" priming position.
5. Point the gun into the metal pail and hold a metal part of the gun firmly against the pail. Refer to Figure 3.

WARNING

To reduce the risk of static sparking which can cause fire or explosion, always hold a metal part of the gun firmly against the metal pail when flushing. This also reduces splashing.

FIGURE 3

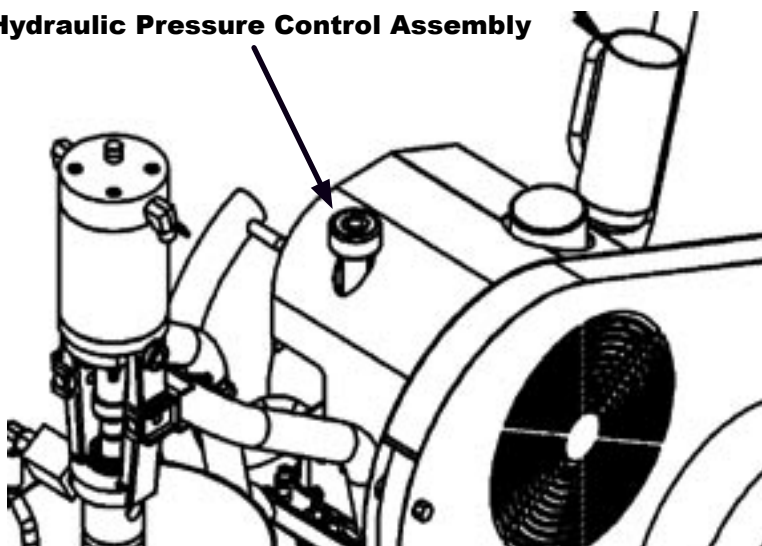
MAINTAIN FIRM
METAL TO METAL
CONTACT BETWEEN
GUN AND CONTAINER



6. Disengage the gun safety latch and squeeze the gun trigger. Turn Pressure Control Knob (Figure 4) Clockwise to increase pressure just enough to cycle the pump.
7. Turn the PrimeValve to the "CLOSED" position. This will allow solvent to be flushed through the pump, hoses and gun. Allow the unit to operate until clean solvent comes from the gun.
8. Release the trigger and engage the gun safety latch.
9. Whenever you shut off the sprayer, follow the "PRESSURE RELIEF PROCEDURE" (Page 11).

FIGURE 4

Hydraulic Pressure Control Assembly



SETTING UP

1. Connect the hose and gun.

- a. Remove the plastic cap plug from the outlet fitting and screw a conductive or grounded 3000 psi airless spray hose onto fluid outlet.
- b. Connect an airless spray gun to the other end of the hose.
- c. Do not use steel braided airless hose. Use nylon braided airless hose only.

NOTE: Do not use thread sealer on swivel unions as they are made to self-seal.
Use thread seal on tapered male threads only.

WARNING

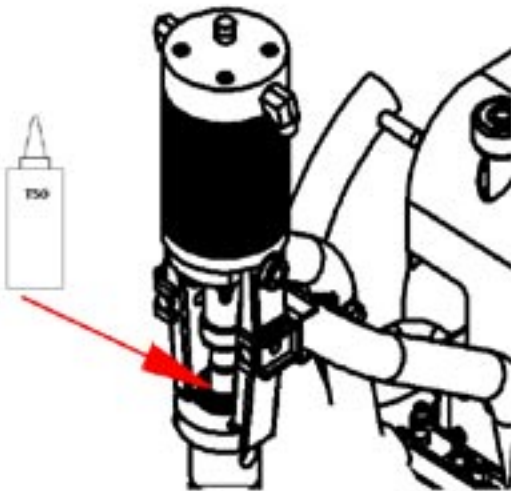
To reduce the risk of static sparking, fire or explosion which can result in serious bodily injury and property damage, always ground the sprayer and system components and the object being sprayed, as instructed in the safety warning section of this manual.

2. Fill the packing nut/wet cup with 5 drops of Airlessco Throat Seal Oil (TSO). See (Figure 5).

3. Flush the sprayer

As per "How To Flush" in this manual (Page 8).

FIGURE 5



SETTING UP (continued)

4. Adjusting the pressure

- a. Turn the Pressure Control Knob Clockwise to increase pressure and counterclockwise to decrease pressure.
- b. Always use the lowest pressure necessary to completely atomize the material.

Note: Operating the sprayer at higher pressure than needed, wastes material, causes early tip wear, and shortens sprayer life.

- c. If more coverage is needed, use a larger tip rather than increasing the pressure.
- d. Check the spray pattern. The tip size and angle determines the pattern width and flow rate.

WARNING

Follow the "Pressure Relief Procedure". To reduce the risk of injection, never hold your hand, body, fingers or hand in a rag in front of the spray tip when cleaning or checking for a cleared tip. Always point the gun toward the ground or into a waste container when checking to see if the tip is cleared or when using a self-cleaning tip.

WARNING

When you spray into the paint bucket, always use the lowest spray pressure and maintain firm metal to metal contact between gun and container.

WARNING

To stop the unit in an emergency, turn the motor off. Then relieve the fluid pressure in the pump and hose as instructed in the Pressure Relief Procedure.

Avoiding Tip Clogs

There is an easy way to keep the outside of the tip clean from material build up:

Every time you stop spraying, for even a minute, lock the gun and submerge it into a small bucket of thinner suitable for the material sprayed.

Thinner will dissolve the buildup of paint on the outside of tip, tip guard and gun much more effectively if the paint doesn't have time to dry out completely.

WARNING

Be sure to relieve pressure in the pump after filling with Airlessco Pump Conditioner.

5. When Shutting off the Sprayer

- a. Whenever you stop spraying, even for a short break, follow the "Pressure Relief Procedure".
- b. Clean the tip & gun as recommended in the spray gun instruction manual.
- c. Flush the sprayer at the end of each work day, if the material you are spraying is water-based, or if it could harden in the sprayer overnight. See "Flushing". Use a compatible solvent to flush, then fill the pump and hoses with an oil based solvent such as mineral spirits.
- d. For long term shutdown or storage, refer to the "Flushing" section of this manual.

PRESSURE RELIEF PROCEDURE



IMPORTANT!

To avoid possible serious body injury, always follow this procedure whenever the sprayer is shut off, when checking it, when installing, changing or cleaning tips, whenever you stop spraying, or when you are instructed to relieve the pressure.

1. Engage the gun safety latch. Refer to the separate instruction manual provided with your gun on its safety features and how to engage safety latch.
2. Turn the unit off & unplug it from the electrical outlet.
3. Disengage the gun safety latch and trigger the gun to relieve residual fluid pressure.

Hold metal part of the gun in contact with grounded metal pail. USE MINIMUM PRESSURE !



4. Turn Prime Valve to the open (priming) position to relieve residual fluid pressure.
5. Re-engage gun safety latch and close Prime Valve.

FIGURE 6



If the **SPRAY TIP OR HOSE IS CLOGGED**, follow Step 1 through 5 above. Expect paint splashing into the bucket while relieving pressure during Step 4.

If you suspect that pressure hasn't been relieved due to damaged Prime Valve or other reason, engage the gun safety latch and take your unit to an authorized Airlessco Service Center.

SPRAY GUN OPERATION

SPRAY GUN

Attach spray gun to airless unit and tighten fittings securely. Set the gun safety latch. (Also may be called gun safety lock, or trigger lock)

* The gun safety latch should always be set when the gun is not being triggered.

Read all warnings and safety precautions supplied with the spray gun and in product manual.

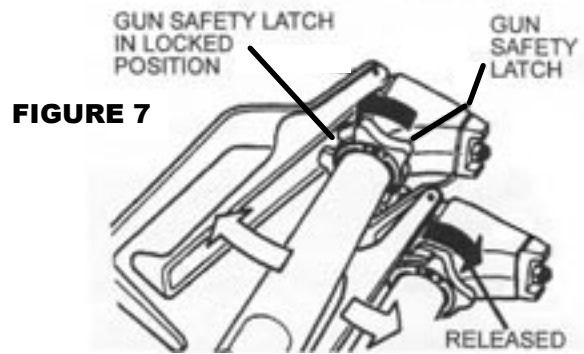


FIGURE 7

MAJOR COMPONENTS OF SPRAY GUN AND REVERSIBLE SPRAY TIP

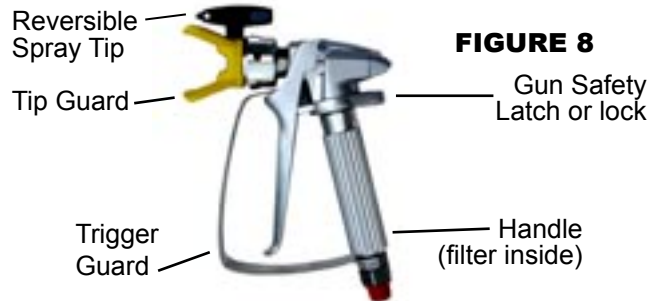


FIGURE 8

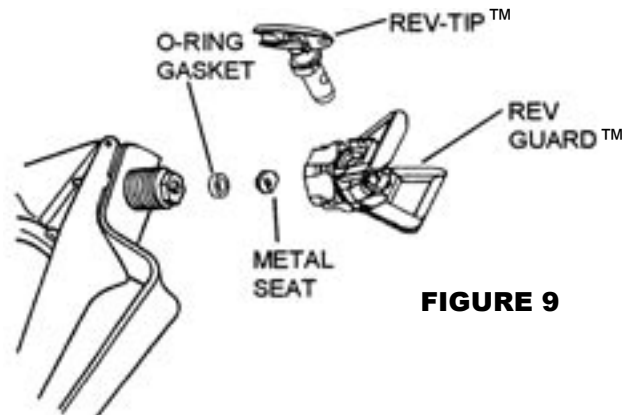


FIGURE 9

SPRAY TIP ASSEMBLY

1. Be sure pressure relief procedure is followed before assembling tip and housing to the gun.
2. Lock gun safety latch.
3. Insert REV-TIP™ cylinder into the REV-GUARD™ (guard housing assembly).
4. Guide metal seat into REV-GUARD™ (guard housing assembly) through retaining nut & turn until it seats against the cylinder.
5. Insert O-Ring gasket on metal seat so it fits in the grooves.
6. Finger tighten REV-GUARD™ retaining nut onto the gun.
7. Turn guard in the desired position.
8. Completely tighten the retaining nut.

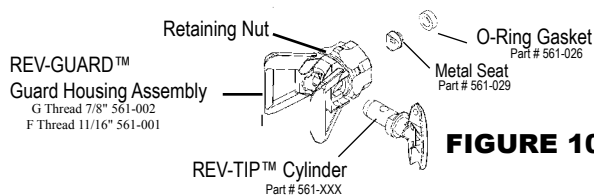


FIGURE 10

TO REMOVE CLOGS FROM SPRAY TIP

1. Lock gun safety latch.
2. Turn REV-TIP™ handle 180 degrees.
3. Disengage trigger lock & trigger gun into pail.
4. If the REV-TIP™ handle appears locked (resists turning), loosen the retaining nut. The handle will now turn easily.
5. Engage gun safety latch & return handle to the spray position.

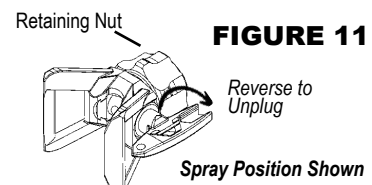


FIGURE 11

CLEANING SPRAY GUN

Immediately after the work is finished, flush the gun out with a solvent. Brush pins with solvent and oil them lightly so they will not collect dried paint.

CLEANING FILTER IN GUN HANDLE

To clean the filter, use a brush dipped in an appropriate solvent. Change or clean filters at least once a day. Some types of latex may require a filter change after four hours of operation.

CLOGGED FLAT TIP

Should the spray tip become clogged, relieve pressure from hose by following the "Pressure Relief Procedure." Secure gun with the safety latch, take off guard, take out the tip, soak in appropriate solvent & clean with a brush. (Do not use a needle or sharp pointed instrument to clean the tip. The tungsten carbide is brittle and can chip.)

SPRAYING TROUBLESHOOTING CHART

Problem	Cause	Correction
Coarse Spray, Spotty Pattern	Pressure setting low Irratic spray gun/hand motion	Increase pressure setting Use a steady, parallel pass
Excessive Overspray (Fogging)	Pressure setting high Paint over thinned/reduced/cut	Reduce pressure setting Use less thinner/water/reducer
Spray Pattern Excessively Wide	Incorrect fan width selection	Select narrower fan width tip*
Spray Pattern Excessively Narrow	Incorrect fan width selection	Select wider fan width tip*
Excessive Paint Delivery Paint Film Runs/Sags	Large tip orifice for application Paint over thinned/reduced/cut Excessive pressure Spray gun/hand speed slow	Select smaller tip orifice* Use less thinner/water/reducer Reduce pressure setting Increase pass speed
Spray Pattern Rounded and Heavy: Pump Does Not Keep Up	Tip worn beyond use	Replace with new tip*
Spray Pattern Pulsates/Irratic: Pump Does Not Keep Up	Pump worn or malfunctioning	Service pump
Thin or Spotty Coverage (Holidays)	Small tip orifice Spray gun/hand speed fast	Select larger tip orifice* Decrease pass speed
Thin Coverage in Center of Pattern (Fingers)	Tip size larger than pump specs Low pressure setting Pump worn or malfunctioning	Replace with correct tip for pump* Increase pressure setting Service pump
Spray Pattern Irregular, Deflected	Tip orifice partially clogged Tip damaged	Clean tip carefully Replace with new tip*
Excess Paint Builds on Tip Guard	Spray gun excessively close to surface Pressure setting high	Hold gun further from surface sprayed Reduce pressure setting
Drips, Spits From Tip	Valve seat and/or ball in gun head damaged or worn	Service spray gun, replace valve assembly
Tip Clogs Continually	Debris in paint Gun filter missing Coarse filter mesh	Thouroughly strain paint before use Insure gun filter is in handle Use fine mesh filter in gun handle
Gun Filter Clogs Quickly	Debris in paint Pump inlet strainer missing	Thouroughly strain paint before use Do not operate without intlet strainer

***See "REV-TIP Selection Chart" in
this manual (Page 14)**

REV-TIP™ SELECTION CHART

Spray tip selection is based on paint viscosity, paint type, and job needs. For light viscosities (thin paints), use a smaller tip; for heavier viscosities (thicker paints), use a larger tip size.

Spray tip size is based on how many gallons of paint per minute can be sprayed through the tip. Do not use a tip larger than the maximum pump flow rate or capacity the sprayer can accommodate. Pump flow rate is measured in gallons per minute (GPM).

REV-TIP® for Painting 561-XXX		SPRAY PAINTING TIP - ORIFICE SIZE (Inches)															
Fan Width (12" from surface)																	
in.	(mm)	.007	.009	.011	.013	.015	.017	.019	.021	.023	.025	.027	.029 .031	.035	.039	.041	
4-6	102-152		209	211	213	215	217	219	221	223	225	227	229				
6-8	152-203	307	309	311	313	315	317	319	321	323	325	327		335			
8-10	203-254		409	411	413	415	417	419	421	423	425	427	431				
10-12	254-305			511	513	515	517	519	521	523	525	527	531	535			
12-14	305-356			611	613	615	617	619	621	623	625	627	631	635	639	641	
14-16	356-406					715	717		721						739	741,745	
16-18	406-457					815		819	821				831				
20-24	508-610			NEW WIDE PATTERN REV-TIP ▶					W21	W23	W25						
Gun Filter C = Coarse F = Fine		F	F	F	F,C	C	C	C	C	C	REMOVE FILTER						
Wood Interior	Lacquer, Varnish Stain, Sealer Enamel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Wood Exterior	Exterior Stain Vinyl, Acrylic, Latex				.	.	.	.	.	.	.	.	.	.	.	.
Masonry	vinyl,oil-base alkyd Latex, Acrylic Block Filler Elastomer				.	.	.	.	.	.	.	.	.	.	.	.
Ceiling	Hi Build, Mil White								.	.	.	.	.	.	.	.
Structural Steel	Heavy Coatings								.	.	.	.	.	.	.	.
Water Flow Rate (gal./min.) (water @ 2000psi, 138 bar)			.12 .49	.18 .69	.24 .91	.31 1.17	.38 1.47	.47 1.79	.57 2.15	.67 2.54	.77 2.96	1.03 3.90	1.31 4.98	1.63 6.17	1.80 6.81		
Paint Flow Rate (gal./min.) (latex paint @ 2000psi, 138 bar/1.36 spec. gr.)			.10 .38	.15 .57	.21 .79	.27 1.02	.33 1.25	.40 1.51	.49 1.85	.58 2.20	.66 2.50	.88 3.33	1.12 4.24	1.39 5.26	1.54 5.83		
Pump Minimum (gal./min.)			.25	.25	.33	.40	.50	.60	.75	.88	1.0	1.25	1.5	2.0	2.2		
Output* (liters/min.)			1.0	1.0	1.25	1.5	1.9	2.3	2.8	3.3	3.8	4.7	5.7	7.5	8.2		
*Pump will support tip worn to next larger size.																	

Protected By U.S. Patent No. 6,264,115 Other U.S. & Foreign Patents Applied For.

PATTERN WIDTH

Thickness of the paint coat per stroke is determined by spray tip "fan width", the rate of the spray gun movement, and the distance to surface you are painting.

SPRAY TIP SELECTION

Two tips having the same tip size, but different pattern widths will deliver the same amount of paint over a different area (wider or narrower strip). A spray tip with a narrow pattern width makes it easy to spray in tight places.

SPRAY TIP REPLACEMENT

During use, especially with latex paint, high pressure will cause the orifice to grow larger. This destroys the pattern that distributes the paint efficiently across the surface being sprayed. Always replace tips before they become excessively worn. Worn tips waste paint, cause overspray, make cutting-in difficult, and can decrease sprayer performance.

FIELD TROUBLESHOOTING

<u>PROBLEM</u>	<u>CAUSE</u>	<u>SOLUTION</u>
Unit doesn't prime	<ul style="list-style-type: none"> ➤ Airleak due to: <ul style="list-style-type: none"> • Loose Suction Nut • Worn O-Rings • Leak in Siphon Assy ➤ Stuck or Fouled Balls 	<ul style="list-style-type: none"> • Tighten Suction Nut • Service Suction Assy • Replace Siphon Assy ➤ Service outlet valve suction assembly
Unit primes but has no or poor pressure	<ul style="list-style-type: none"> ➤ Pressure set too low ➤ Filter(s) are clogged ➤ Outlet Valve fouled/worn ➤ Prime valve bypassing ➤ Packings and/or piston worn 	<ul style="list-style-type: none"> ➤ Turn up pressure ➤ Clean or replace gun filter, inlet filter and/or manifold filter ➤ Service outlet valve ➤ Clean or replace prime valve • Tighten packing nut • Repack unit
Unit does not maintain good spraying pressure	<ul style="list-style-type: none"> ➤ Blown spray tip ➤ Packings and/or piston worn ➤ Upper Seat worn 	<ul style="list-style-type: none"> ➤ Replace spray tip ➤ Repack unit ➤ Replace upper seat
Unit does not run	<ul style="list-style-type: none"> ➤ Circuit Breaker Tripped ➤ Engine Oil Level Low 	<ul style="list-style-type: none"> ➤ Reset Breaker ➤ Check Engine Oil Level ➤ Place Machine On Level Surface

SERVICING THE FLUID PUMP

Fluid Pump Removal - Refer to Figure 12

1. Follow the Pressure Relief Procedure page 11.
2. Flush the material you are spraying out of the machine.
3. Remove the Front Cover (119-099).
4. Slip Retaining Ring (116-106) down to expose the Piston Pin.
5. Push Piston Pin (119-025) out of the piston pin hole.
6. Loosen Jamb Nut (187-088) until the Fluid Pump can unthread from the Yoke (186-078).

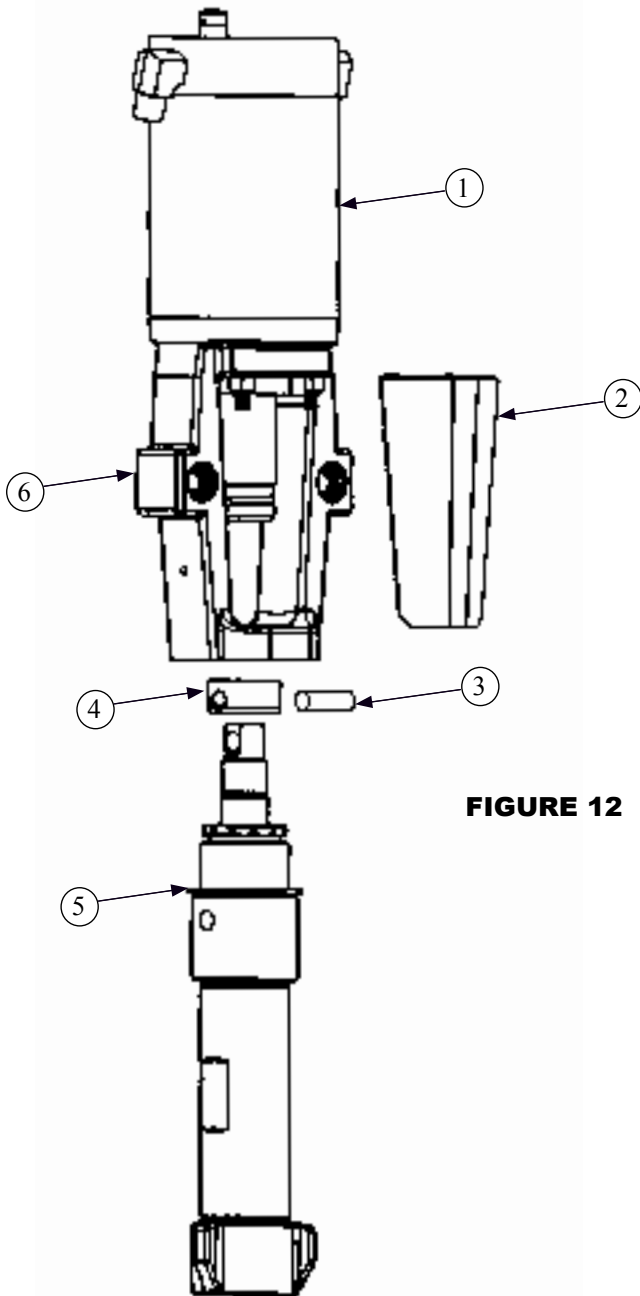


FIGURE 12

Disassembly of the Fluid Pump - Figure 19

1. Remove Fluid Pump from machine - Refer to **Fluid Pump Removal**, Page 16.
2. Remove Inlet Valve Assembly - Refer to **Servicing Inlet Valve**, Page 18.
3. Remove Upper Packing Adjustment nut (187-071) from Outlet Housing (187-076).
4. Remove Pump Cylinder (187-077) from Extension Tube (187-102), pulling Displacement Rod (187-070) out through bottom of Outlet Housing. Discard O-ring (106-004).
5. Remove Outlet Housing from Extension Tube. Discard O-ring (106-004).
6. Remove all old packings and glands from Outlet Housing; retain Male Gland (187-073) and Female Gland (187-072), they will be re-used unless damaged.
7. Remove Piston End (187-078) from Rod Extension (187-101).
8. Remove Jam Nuts (187-089 x 2) from Piston End. Remove all old packings, glands and Scraper (187-083) from Piston End; retain Male Gland (187-073) and Female Gland (187-072), they will be re-used unless damaged.
9. Disassemble Outlet Valve - Refer to **Servicing Outlet Valve**, Page 17.
10. Inspect Displacement Rod and Cylinder inside surface for wear or damage; thoroughly clean all parts to be re-used.

FIGURE 12 PARTS LIST

ITEM #	PART #	DESCRIPTION
1	186-100	Hydraulic Motor
2	119-099	Front Cover
3	119-025	Piston Pin
4	116-106	Retaining Road
5	187-088	Jamb Nut
6	186-078	Yoke

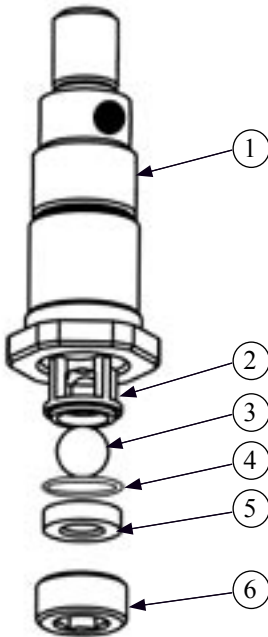
SERVICING THE FLUID PUMP

Fluid Pump Reinstallation - Refer to Figure 12

1. With the Retaining Ring loosely in place around the pump piston, thread the Fluid Pump in to the Yoke (186-078) until the top edge of the Outlet Housing (187-086) is one thread above the inside edge of the Yoke threaded bore.
2. Tighten the Jamb Nut (187-088) until it stops against the bottom edge of the Yoke.
3. Line up the Displacement Rod pin hole with the Hydraulic Piston pin hole; insert the Piston Pin.
4. Slip the Retaining Ring up around the piston pin bore on the Hydraulic Piston.
5. Run the machine at full pressure for several minutes and check for leaks. Release the pressure by following the Pressure Relief Procedure & readjust the packing nut per step 7 in the Packing Replacement Procedures on page 20.
6. Reinstall Front Cover

SERVICING OUTLET VALVE ASSEMBLY

FIGURE 13



Disassembly of Outlet Valve - Figure 13

1. Remove Fluid Pump from machine - Refer to **Fluid Pump Removal**, Page 16.
2. Remove Outlet Valve Assembly - Follow steps 1-9, **Disassembly of the Fluid Pump**, Page 16
3. Carefully hold Piston End (187-078) in vise bottom up to access 7/16" Hex in Retainer (187-082). Remove Retainer.
4. Remove Outlet Seat (187-081). Do not pry, it will chip the edges.
5. Remove PTFE O-Ring (106-015), Outlet Ball (187-091) and Outlet Ball Guide (187-079).
6. Remove all old packings and glands from Outlet Housing; retain Male Gland (187-073) and Female Gland (187-072), they will be re-used unless damaged.
7. Clean and inspect parts for wear or damage, replace parts as necessary. PTFE O-Ring (106-015) will always be replaced in this procedure.

Re-assembly of Outlet Valve - Figure 13

1. Install Ball Guide (187-079), Ball (187-091), Seat (187-081) and O-Ring (106-015) into Piston End.
2. Install Retainer (187-082) into Piston End. Torque Retainer to 30 Ft-Lb.
3. Install new packings, glands and scraper - Refer to **Packing Replacement Procedures**, Page 20.

FIGURE 13 PARTS LIST

ITEM #	PART #	DESCRIPTION
1	187-078	Piston End
2	187-079	Outlet Ball Guide
3	187-091	Outlet Ball
4	106-015	O-Ring
5	187-081	Outlet Seat
6	187-082	Retainer

SERVICING INLET VALVE ASSEMBLY

FIGURE 14

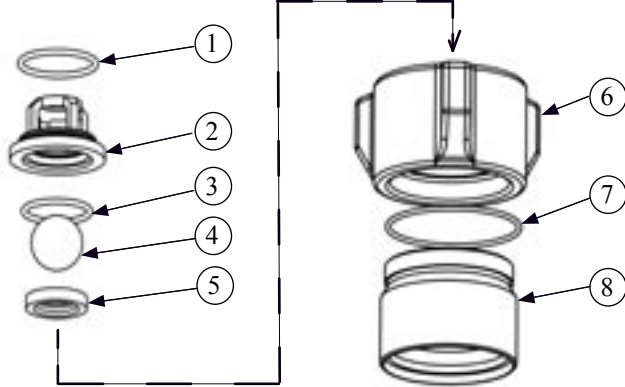


FIGURE 14 PARTS LIST

ITEM #	PART #	DESCRIPTION
1	106-013	O-Ring, Viton
2	187-087	Inlet Ball Guide
3	106-008	O-Ring, PTFE
4	187-092	Inlet Ball
5	187-086	Inlet Seat
6	187-084	Inlet Valve Housing
7	119-110	O-Ring, Viton
8	119-092	Inlet Filter

Disassembly of Inlet Valve - Figure 14

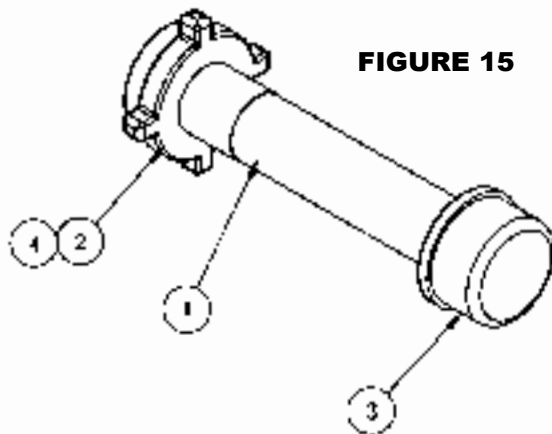
1. Relieve pressure following Pressure Relief steps on page 11.
2. Remove Inlet Valve Housing (187-084).
3. Remove Ball Guide (187-087), O-Rings and Inlet Ball (187-092). Remove Inlet Seat (187-086).
7. Clean and inspect parts for wear or damage, replace parts as necessary. PTFE O-Ring (106-008) and Viton O-Ring (106-013) will always be replaced in this procedure.

Re-assembly of Inlet Valve - Figure 14

1. Reinstall inlet parts in correct order. Reverse inlet seat if necessary.
2. Run the machine at pressure for several minutes, inspect for leaks and proper operation.

INLET SUCTION ASSEMBLIES

FIGURE 15



Suction Extension 119-085

FIGURE 15 PARTS LIST

ITEM #	PART #	DESCRIPTION
1	301-572	Suction Tube
2	189-587	Suction Collar
3	119-094	Filter Basket
4	119-110	O-Ring

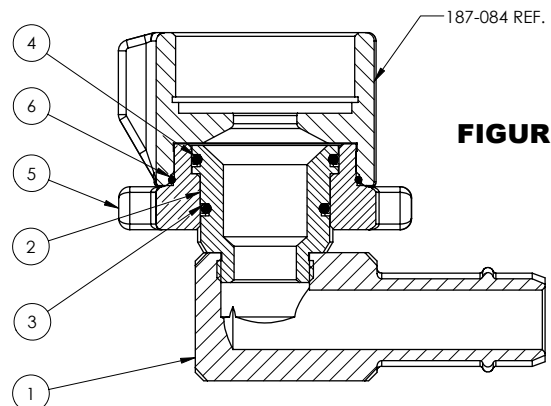


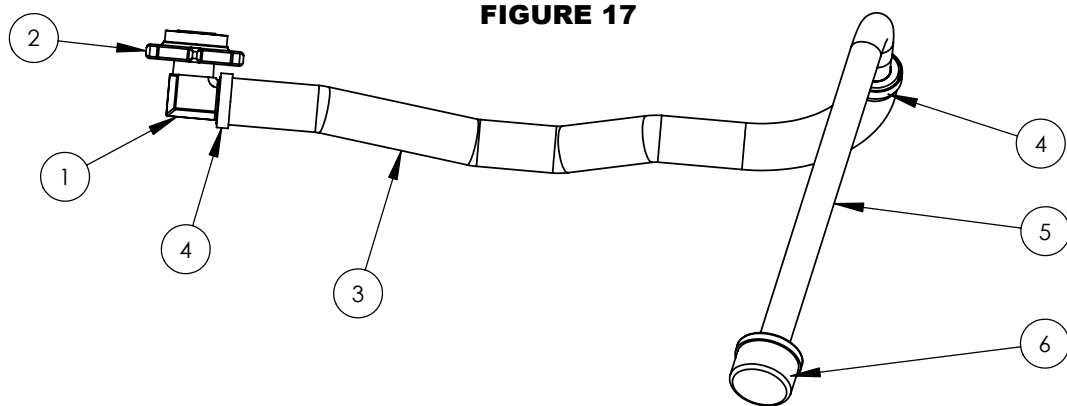
FIGURE 16

Swivel Assembly 119-107

FIGURE 16 PARTS LIST

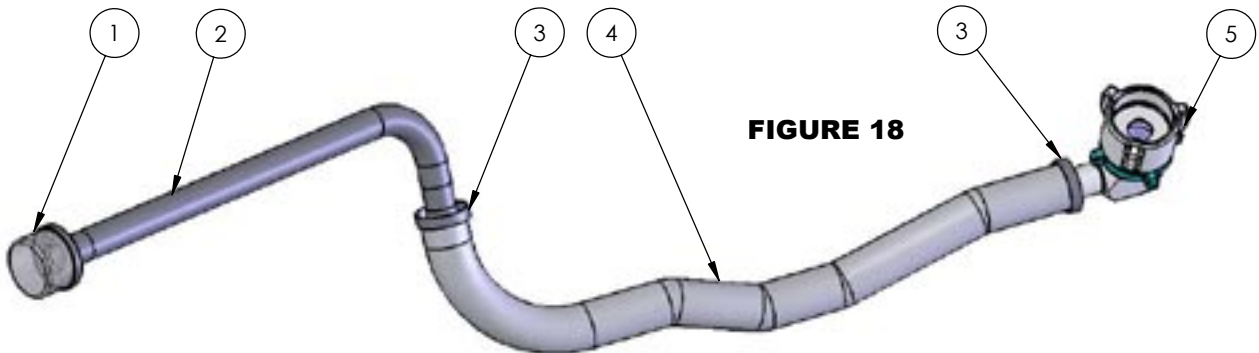
ITEM #	PART #	DESCRIPTION
1	189-573	Suction Elbow
2	189-574	Swivel Body
3	119-096	O-Ring, Viton
4	119-095	O-Ring, Viton
5	189-584	Swivel Nut
6	119-110	O-Ring, Viton

OPTIONAL SUCTION ASSEMBLIES



5 Gal. Latex Suction Assembly 119-108

FIGURE 17 PARTS LIST		
ITEM #	PART #	DESCRIPTION
1	100-668	Suction Elbow
2	189-587	Suction Nut
3	100-664	1" ID Suction Hose
4	250-116	Clamp
5	301-514	5 Gal Suction Tube
6	141-008	Filter Basket



55 Gal. Latex Suction Assembly 119-087

FIGURE 18 PARTS LIST		
ITEM #	PART #	DESCRIPTION
1	141-008	Filter Basket
2	301-545	55 Gal Suction Tube
3	250-116	Clamp
4	100-664	1" ID Suction Hose
5	119-107	Swivel Assembly

PACKING REPLACEMENT PROCEDURES

REASSEMBLY - Figure 19

1. Soak all Leather Packings (187-074) in oil for 5-10 minutes before assembly.
2. Install Scraper (187-083) open edge downwards, and metal Female Gland (187-072) open side up on Piston End (187-078).
3. Install five UHMWPE Packings (187-075) and three Leather Packings (187-074) on Piston End, open side up, in this order from bottom: Plastic, Leather, Plastic, Leather, Plastic, Leather, Plastic, Plastic. Finish with metal Male Gland (187-073) rounded edge downwards.
4. Install one Jam Nut (187-089) on Piston End: Do Not Tighten.
5. Carefully insert assembled Piston End (Figure 19) downward into top of Cylinder (187-077) until only the metal Male Gland (187-073) is exposed.
6. Use a Packing Tool (189-211) through the Piston End Outlet holes to hold the Piston End from spinning while tightening the Jam Nut until there are FOUR full threads exposed on Piston End.
7. Place TWO drops of BLUE LOCTITE on the Piston End Jam Nut threads, and install second Jam Nut. Tighten it until it stops without moving the first Jam Nut.
8. Install metal Male Gland (187-073) rounded edge upwards in the Outlet Housing (187-076).
9. Install four UHMWPE Packings (187-075) and three Leather Packings (187-074) in the Outlet Housing, open side downward in this order: Plastic, Leather, Plastic, Leather, Plastic, Leather, Plastic. Finish with metal Female Gland (187-072) open side downwards.
10. Install brass Packing Adjustment Nut (187-071) until it contacts Female Gland; Do Not Tighten.

REASSEMBLY - Figure 19

1. Intall PTFE O-Ring (106-004) and Extension Tube (187-102) into bottom of Outlet Housing and tighten until the Extension Tube stops; Do Not Over-tighten.
2. Apply BLUE LOCTITE to Piston End (187-078) top threads and install Rod Extension (187-101), tighten. Use Packing Tool (189-211) through Piston End Outlet holes to prevent Piston End from spinning in Pump Cylinder while tightening Rod Extension.
3. Apply BLUE LOCTITE to Rod Extension top threads and install Displacement Rod (187-070), tighten. Use appropriate size open end wrenches on wrench flats of Extension Rod and Displacement Rod; Do Not place in vise or use pipe wrenches.
4. Install PTFE O-Ring (106-004) into bottom of Extension Tube.
5. Lubricate Displacement Rod with oil, and carefully insert the Pump Cylinder/Rod/Piston Assembly through bottom of Extension Tube/Outlet Housing Assembly, making sure to guide the Displacement Rod Top through the upper packings without damaging the packings.
6. Thread the Pump Cylinder into the bottom of the Extension Tube, tighten until Pump Cylinder stops; Do Not Over-tighten.
7. Tighten brass Packing Adjustment Nut until there is one thread left showing.
8. Install Inlet Valve Assembly - Refer to **Servicing Inlet Valve**, Page 18.
9. Reinstall Fluid Pump - Refer to **Fluid Pump Reinstallation**, Page 17.

FIGURE 19 PARTS LIST

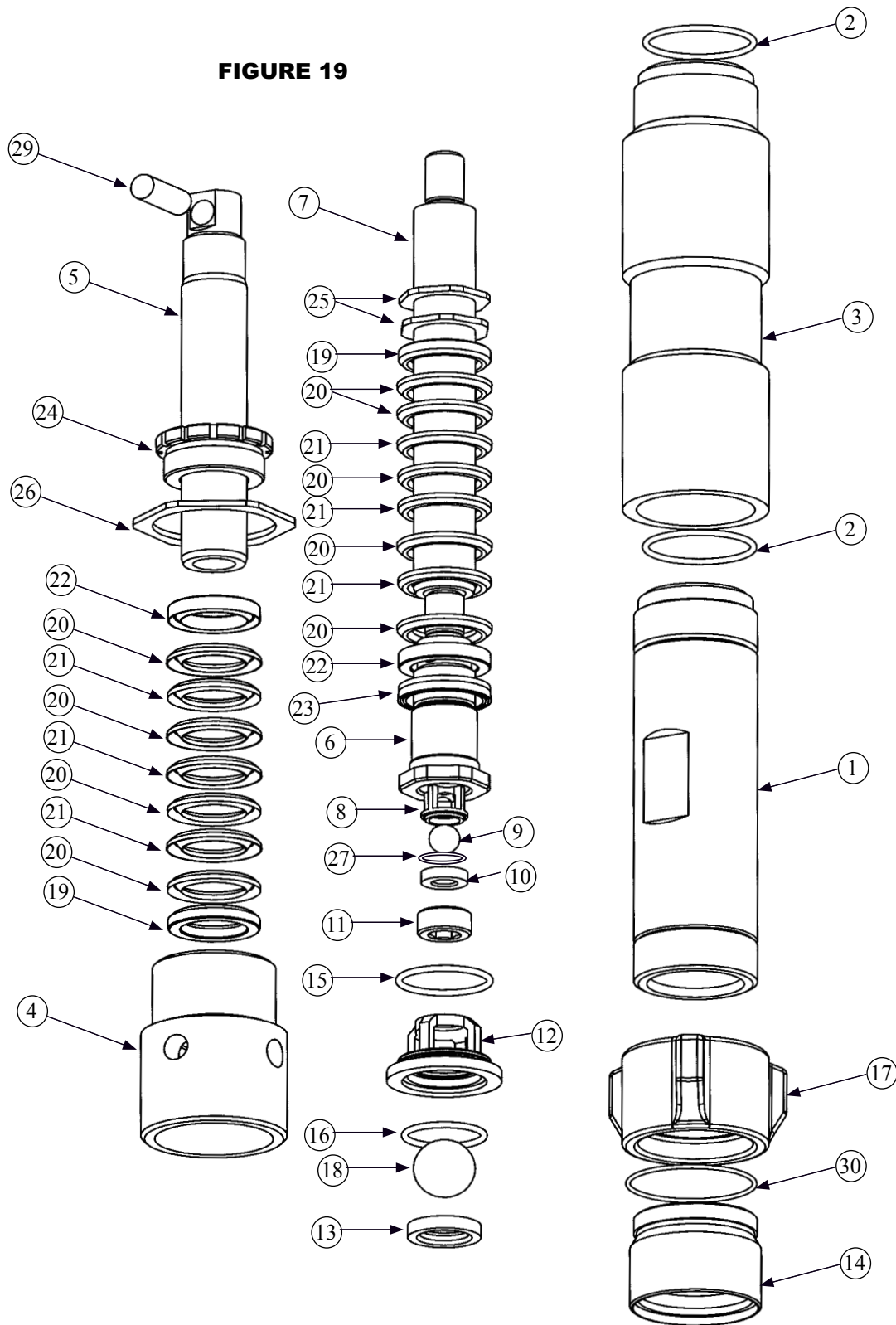
ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	187-077	Cylinder, Pump	16	106-008**	O-Ring
2	106-004**	O-Ring Seal	17	187-084	Inlet Valve Nut
3	187-102+	Extension Tube	18	187-092**	Inlet Ball
4	187-076	Outlet Housing	19	187-073	Male Gland
5	187-070	Displacement Rod	20	187-075**	Packing UHMWPE
6	187-078	Piston End	21	187-074**	Packing Leather
7	187-101+	Rod Extension	22	187-072	Female Gland
8	187-079	Outlet Ball Guide	23	187-083**	Scraper
9	187-091**	Outlet Ball	24	187-071	Packing ADJ Nut
10	187-081	Outlet Seat	25	187-089	Jam Nut
11	187-082	Retainer	26	187-088	Jam Nut
12	187-087	Inlet Retainer	27	106-015**	O-Ring
13	187-086	Inlet Seat	28	116-106	Retaining Ring
14	119-092+	Intake Filter Assy	29	119-025	Piston Pin
15	106-012**	O-Ring	30	119-110	O-Ring

****PARTS INCLUDED IN 189-536 PACKING KIT**

+PARTS USED ON DIRECT IMMERSION PUMP ASSY 187-103

PAINT PUMP ASSEMBLY

FIGURE 19



*See Page 19 For Optional Suction Assemblies

MANIFOLD FILTER - PN 119-084

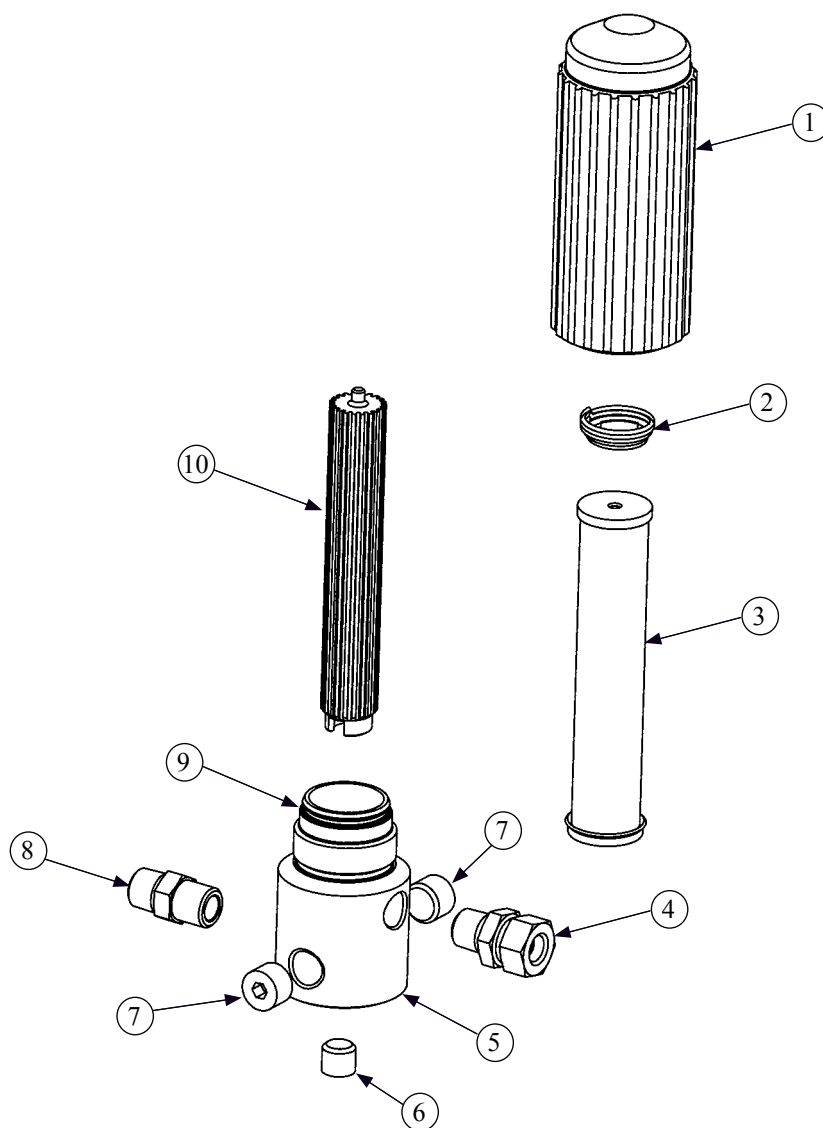


FIGURE 20

FIGURE 20 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	111-202	Housing Bowl	6	100-028	1/4 NPT-M Plug
2	301-256	Spring	7	100-129	3/8 NPT-M Plug
3	111-204	60 Mesh Filter	8	169-010	3/8 NPT-M X 3/8 NPT-M Nipple
4	100-005	3/8 NPS-F X 3/8 NPT-M Swivel	9	106-007	O-Ring, PTFE
5	111-201	Housing Base	10	111-203	Filter Support

PRIME VALVE ASSEMBLY - 119-083

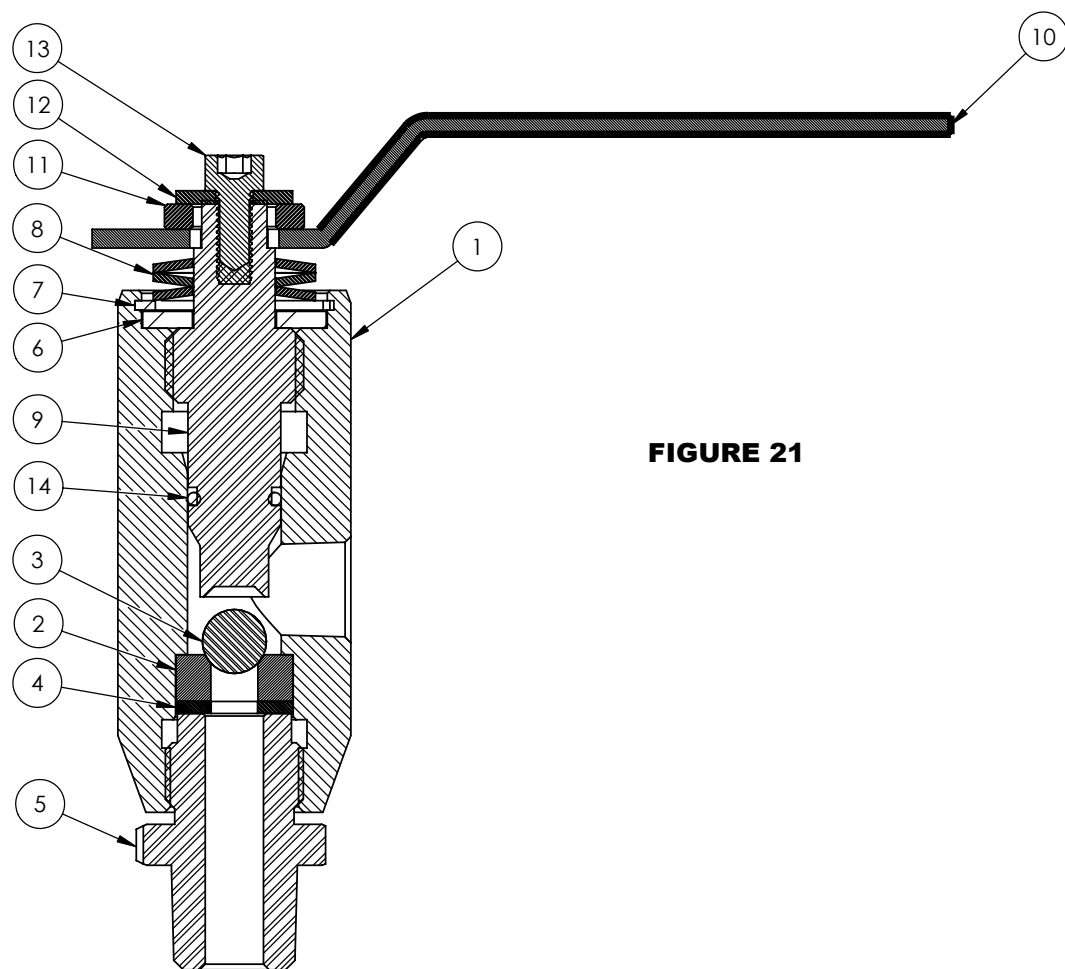


FIGURE 21

FIGURE 21 PARTS LIST					
ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	115-073	Valve Body	8	115-064	Bellville Spring
2	115-029	Valve Seat	9	115-071	Valve Stem
3	115-069	Ball	10	115-303	Handle W/Label
4	115-012	Washer	11	115-072	Spacer
5	115-074	Inlet Fitting	12	115-063	Washer
6	115-067	Washer	13	117-046	Screw
7	115-065	Retaining Ring	14	115-068	O-Ring, Viton

HYDRAULIC PUMP AND RESERVOIR

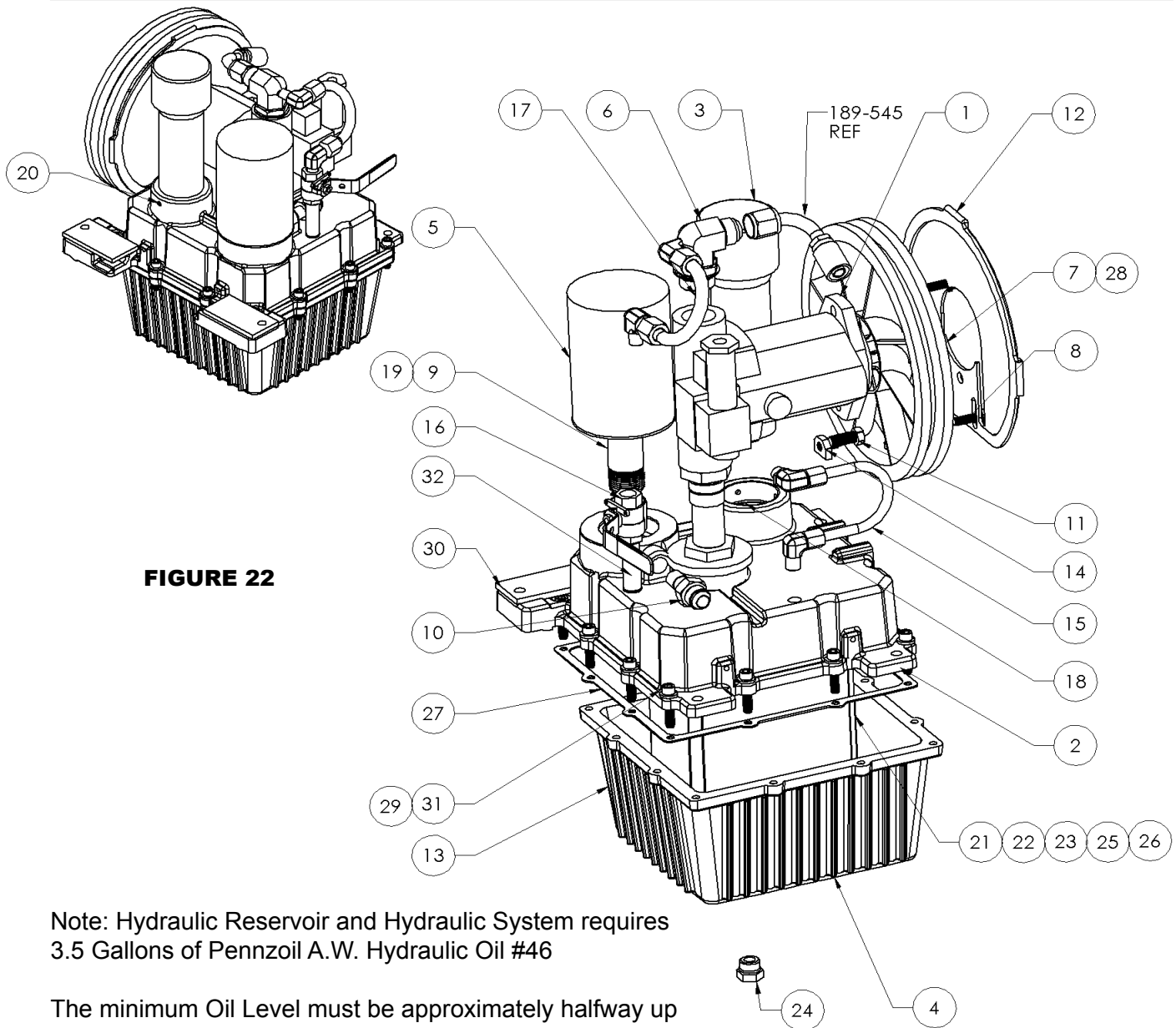


FIGURE 22 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	189-605	Pump Assembly	17	119-067	Hyd Press Tube
2	189-569	Reservoir Top	18	106-032	O-Ring, Filler
3	189-564	Filler/Breath Cap	19	189-557	Fitting
4	189-560	Nut, Pump Fitting	20	136-074	Set Screw
5	189-563	Oil Filter	21	189-556	Baffle
6	189-528	90 deg Elbow	22	189-583	Baffle Plate
7	100-361	Set Screw	23	189-549	Baffle Stopper
8	100-169	Screw	24	189-505	Reservoir Plug
9	119-093	Oil Filler Tube	25	136-134	Rivet
10	189-527	Hyd. Fitting	26	140-042	Washer
11	100-653	Bolt	27	119-074	Reservoir Gasket
12	189-567	Bracket, Pump	28	189-579	Pulley Assembly
13	189-566	Reservoir Bottom	29	143-021	Cap Screw
14	136-235	Nut	30	189-581	Hold Down Plate
15	189-609	Hyd. Bypass Tube	31	113-023	Lockwasher
16	119-066	Ball Valve	32	119-073	3/8 NPT Nipple

HYDRAULIC INLET ASSEMBLY

FIGURE 23

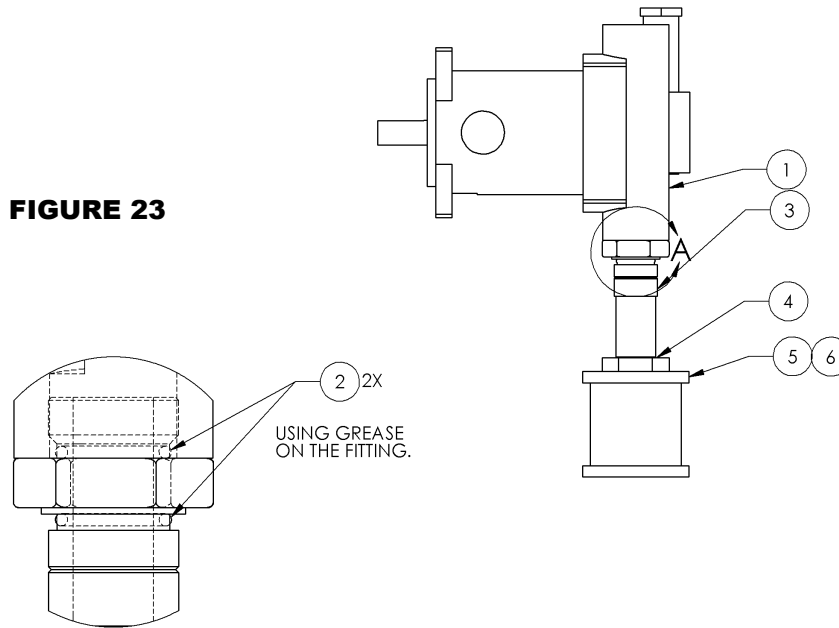


FIGURE 23 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	189-570	Hydraulic Pump	4	189-523	Threaded Nipple
2	189-562	O-Ring, Pump	5	189-565	Strainer, Suction
3	189-561	Pump Inlet Fitting	6	189-568	Inlet Connector

HYDRAULIC MOTOR ASSEMBLY

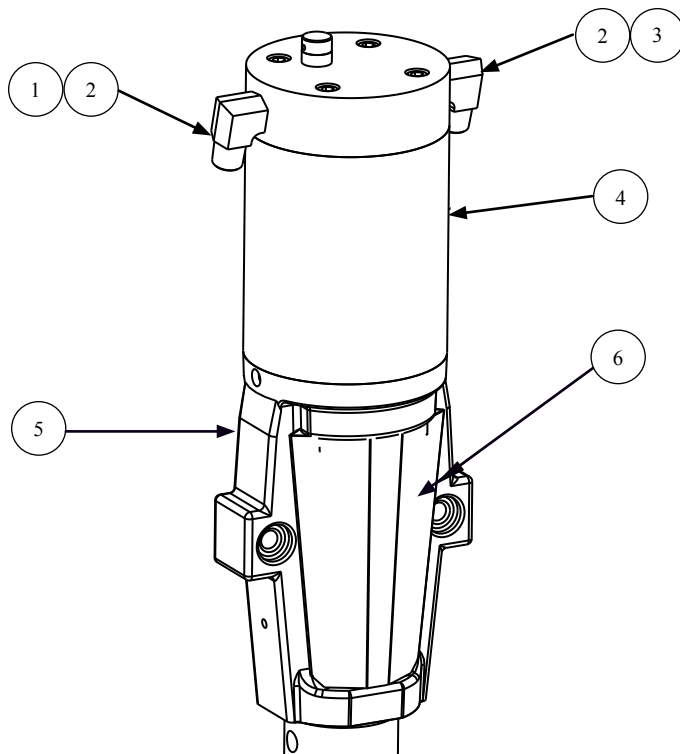


FIGURE 24

FIGURE 24 PARTS LIST

ITEM #	PART #	DESCRIPTION
1	189-546	High Press. Hose
2	100-133	90 deg Elbow
3	189-545	Hyd. Return Hose
4	186-100	Hydraulic Motor
5	186-078	Yoke
6	119-099	Front Cover

FRAME ASSEMBLY

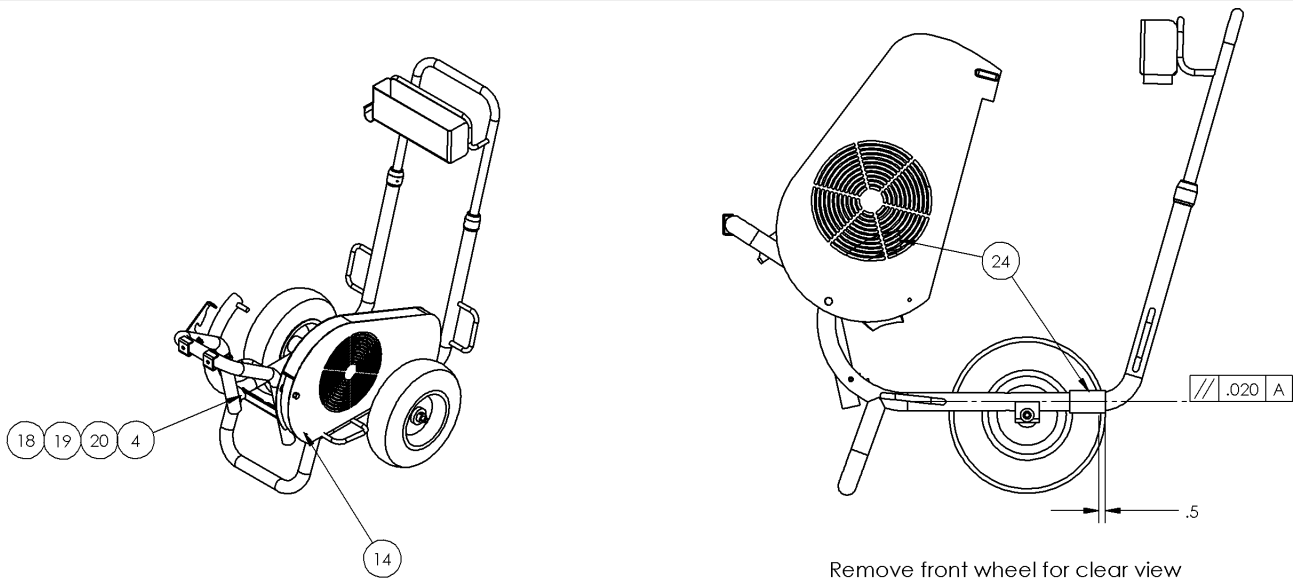


FIGURE 25

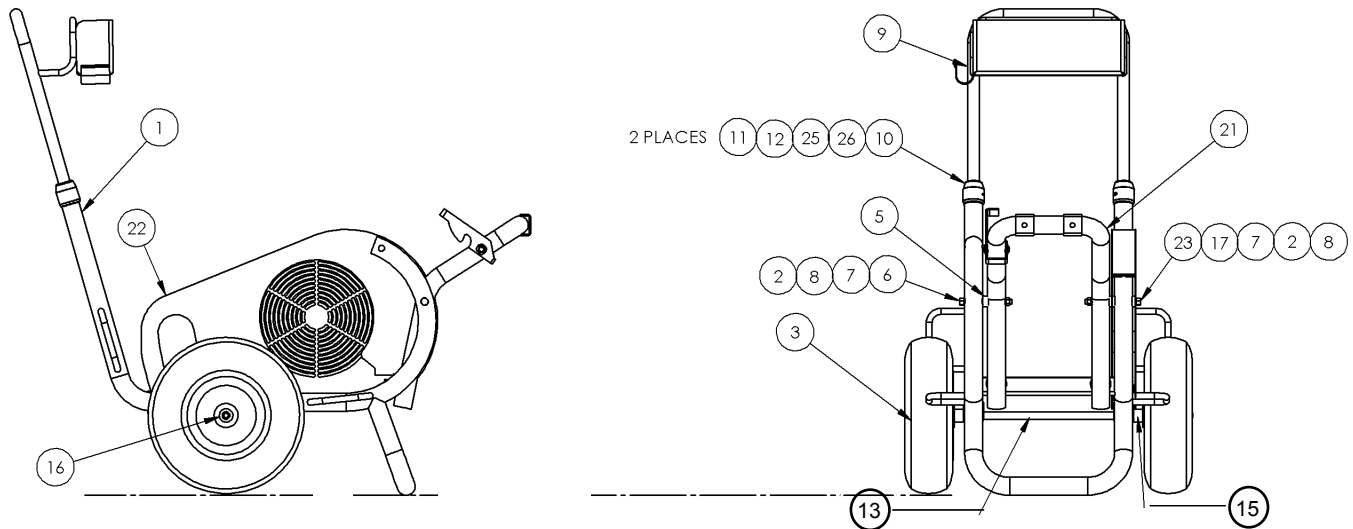
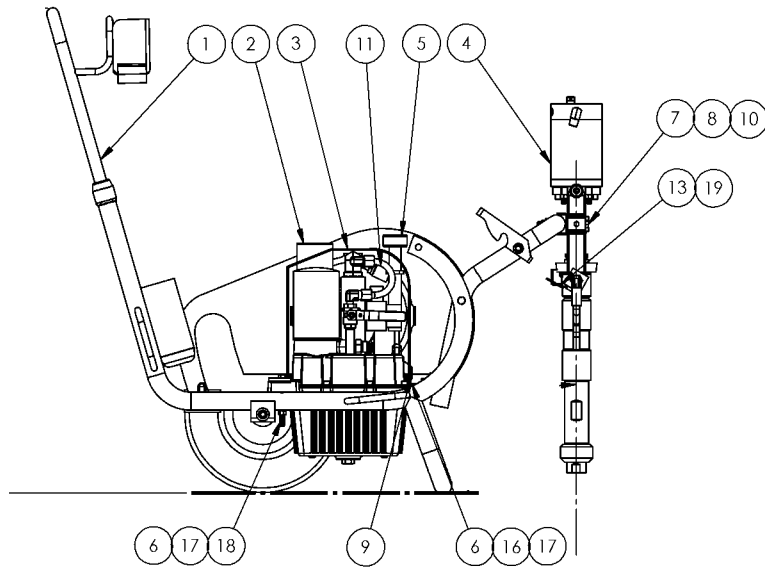


FIGURE 25 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	189-599	Frame, Bare	15	113-030	Spacer
2	189-576	Pivot Tube	16	143-029	Set Collar
3	301-165	Wheel	17	119-081	Hex Bolt
4	189-558	Bumper, Stop	18	140-029	Washer
5	119-077	Spacer	19	136-217	Nylok Nut
6	100-655	Hex Bolt	20	100-377	Screw
7	140-051	Nut	21	189-559	H Support Assy
8	100-656	Washer	22	189-596	Cover, Belt
9	189-530	Handle Assembly	23	119-080	Washer
10	189-452	Cover	24	119-082	Bumper
11	189-450	Guide	25	331-222	Roll Pin
12	189-451	Slide	26	121-024	Snap Button
13	119-079	Axle			
14	136-233	Riv-Nut			

DIRECT IMMERSION ASSEMBLY



ONE WHEEL NOT SHOWN FOR CLEAR VIEW

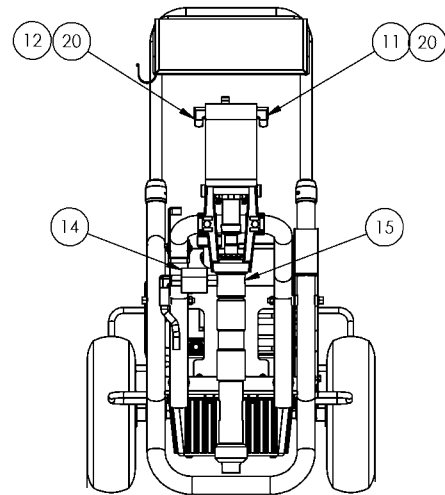


FIGURE 26

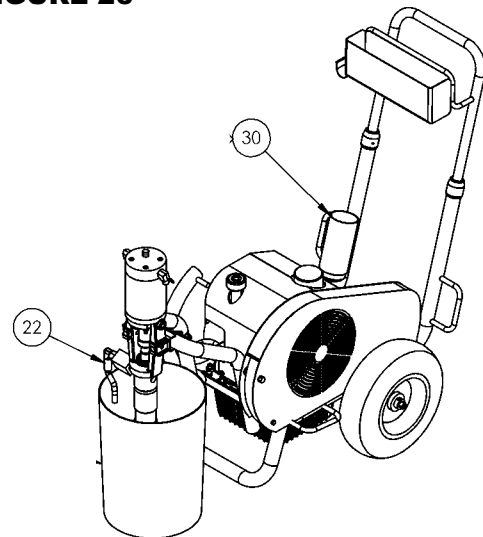
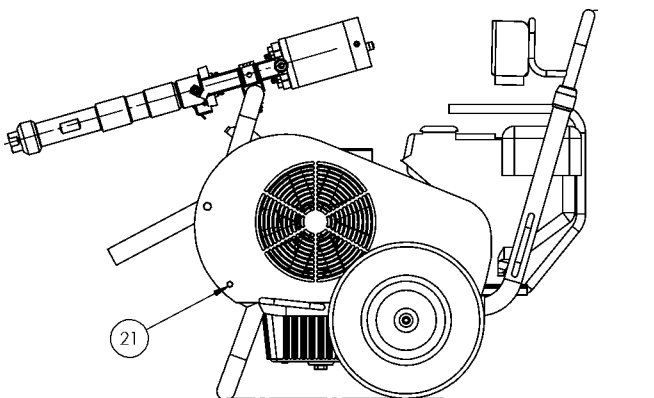


FIGURE 26 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	189-554	Frame Assembly	13	111-014	Pressure Gauge
2	189-571	Hydraulic Assy	14	119-083	Prime Valve
3	189-580	Pump Shroud	15	119-084	Filter Manifold
4	189-606	Paint Pump Assy	16	188-125	Screw
5	189-548	Pressure Control	17	140-051	Nut
6	140-035	Flat Washer	18	100-655	Screw
7	100-307	Screw	19	100-004	90 deg Elbow
8	188-118	Nut	20	100-133	90 deg Elbow
9	100-390	Screw	21	136-234	Screw
10	100-344	Flat Washer	22	119-086	Bypass Assembly
11	189-545	Hyd Press. Hose	30	100-170R	Optional Holder
12	189-546	Hyd Return Hose			

SIPHON UNIT ASSEMBLY

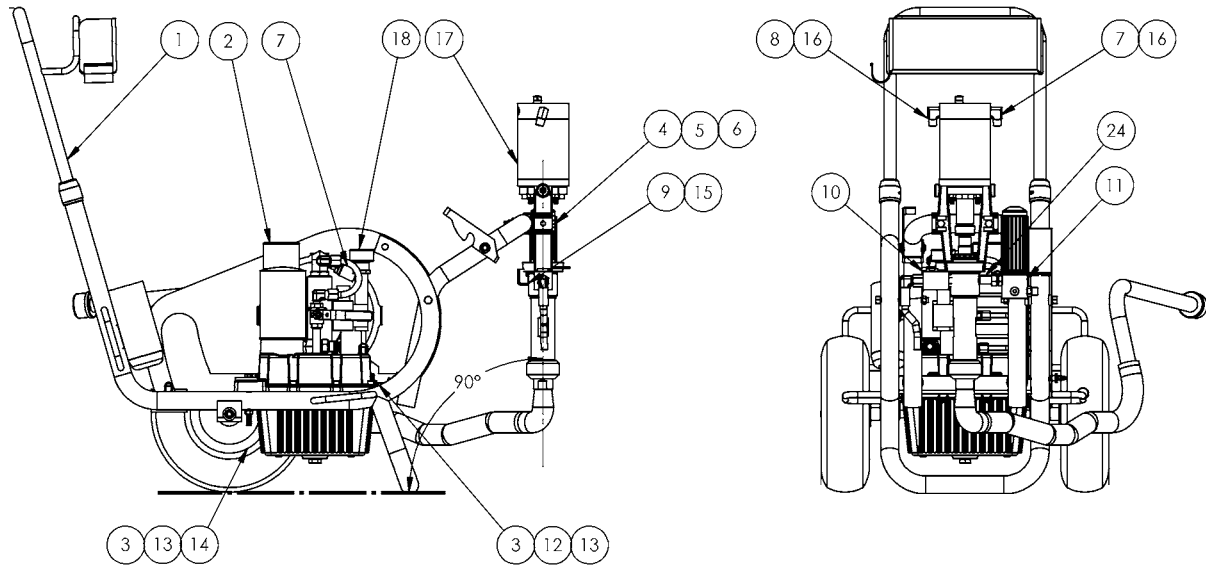


FIGURE 27

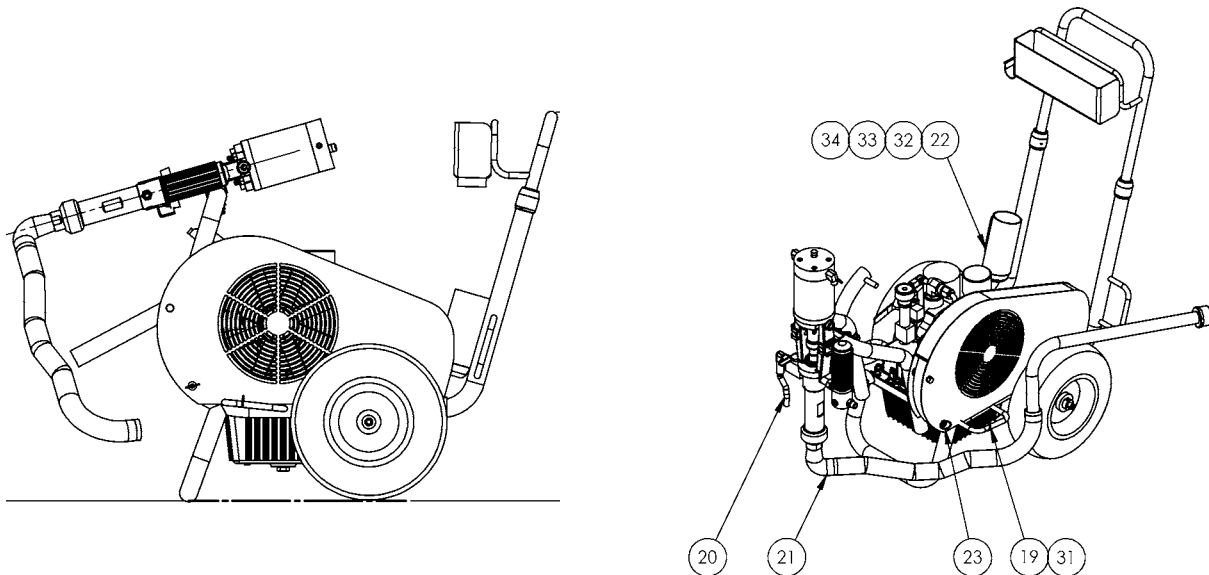


FIGURE 27 PARTS LIST

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	189-554	Frame Assy	15	100-004	90 deg Elbow
2	189-571	Hydraulic Assembly	16	100-133	90 deg Elbow
3	140-035	Flat Washer	17	189-608	Paint Pump Assy
4	100-307	Screw	18	119-060	Pressure Control
5	188-118	Nut	19	136-133	Chain Ring
6	100-344	Flat Washer	20	119-086	Bypass Assembly
7	189-545	Hyd Press. Hose	21	119-087	Suction Assembly
8	189-546	Hyd Return Hose	22	100-170R	Optional Holder
9	111-014	Pressure Gauge	23	119-088	Pin, Spring Loaded
10	119-083	Prime Valve	24	119-089	Nipple
11	119-084	Filter Manifold	31	136-131	Grounding Chain
12	188-125	Screw	32	111-036	Spring Clip
13	140-051	Nut	33	331-342	Screw
14	100-655	Screw	34	120-021	Nylok Nut

MOTOR/ENGINE W/CARRY PLATE ASSEMBLY

FIGURE 28

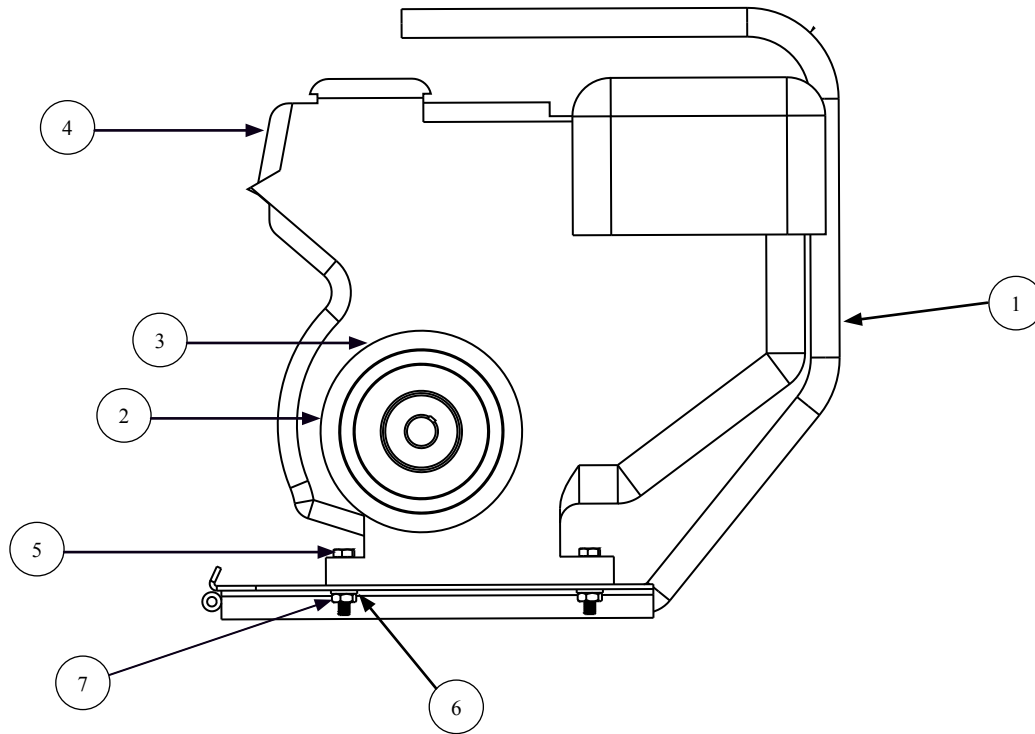


FIGURE 28 PARTS LIST		
ITEM #	PART #	DESCRIPTION
1	189-593	Lifting Handle/Plate Assembly
2	189-531	Pulley, Gas Engine
	189-526	Pulley, Electric Motor (Not Shown)
3	100-361	Set Screw
4	175-025	6.5HP Honda Gas Engine
	175-034	6.5HP Durotech Gas Engine
	XXX-XXX	1.25HP Electric Motor (Not Shown)
5	136-123	Screw
6	113-023	Lock Washer
7	113-022	Nut
8	189-524	V Belt, Gas Engine (Not Shown)
	XXX-XXX	V Belt, Electric Motor (Not Shown)
9	101-434	Warning Decal (Not Shown)

